

U.S. Patent Appln. No.: 09/752,564
Attorney Docket No.: 032405 WN 061

CLEAN COPY OF THE AMENDED CLAIMS

Sub 1. (Twice Amended) A rear gate opening and closing apparatus for automatically opening and closing a rear gate of a vehicle, comprising:

- a power source unit that produces power to actuate said rear gate;
- a slider that transforms said power into a reciprocating motion and for traveling in the longitudinal direction of said vehicle;
- a hinge arm provided for attachment at an upper end of said rear gate for pivotal connection with said vehicle body;
- a connecting rod that interlocks said slider and said hinge arm, said rod transmitting said reciprocating motion to said hinge arm;
- a mounting base that supports said power source unit and said slider;
- a mounting base installer for detachably installing said mounting base in a space formed by a rear rail, a side rail and an under roof of said vehicle; and
- a gas stay rotatably attachable to said side rail at one end thereof and attached to said hinge arm at the other end thereof, and disposed at substantially the same height as and in parallel with said connecting rod throughout movement of said hinge arm for biasing said rear gate in an opening direction.

Sub 7. (Twice Amended) The apparatus according to claim 4, wherein said controller controls said power source for actuating said rear gate so as to vary a closing speed so that the rear gate is rotated in a closing direction against a biasing force of said gas stay when said rear gate is in a self-opening zone and the rotation in a closing direction is restricted when said rear gate is in a self-closing zone.

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8. (Twice Amended) The apparatus according to claim 4, wherein
said controller judges, based on said detection signal from said position detector, a fully
opened or closed condition of said rear gate.

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9. (Twice Amended) The apparatus according to claim 4, wherein
said controller judges, based on a load of said power source unit, a fully opened or closed
condition of said rear gate.

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14. (Once Amended) A vehicle having an apparatus that automatically opens and closes :
rear gate of said vehicle, comprising:
a drive unit installed in a space formed by a rear rail, a side rail and an under roof of said
vehicle, said drive unit producing a power to actuate said rear gate;
a hinge arm rotatably attached to a vehicle body for rotatably supporting said rear gate;
a connecting rod connected to said drive unit and said hinge arm for transmitting the
power of said drive unit to said hinge arm so as to rotate said hinge arm; and
a gas stay connected to said hinge arm at the end thereof and said side rail at the other
end thereof for biasing said rear gate in an opening direction so as to assist the operation of said
drive unit, said gas spring being disposed at substantially the same height as and in parallel with
said connecting rod throughout movement of said gate.